Republic of the Philippines
CIVIL AVIATION AUTHORITY
OF THE PHILIPPINES

BAGONG PILIPINAS

MEMORANDUM CIRCULAR NO.: 020-2023

TO : ALL CONCERNED

FROM : THE DIRECTOR GENERAL

SUBJECT : AMENDMENT 9 TO PHILIPPINE CIVIL AVIATION REGULATIONS - AIR NAVIGATION SERVICES (CAR-ANS) PART 3 GOVERNING AERONAUTICAL METEOROLOGICAL SERVICE 2ND EDITION

REFERENCE:

1. Philippine Civil Aviation Regulations- Air Navigation Services Part 3
2. ICAO Annex 3 Meteorological Service for International Air Navigation
3. CAAP Regulations Amendment Procedures
4. Board Resolution No. 2012-054 dated 28 September 2012

Pursuant to the powers vested in me under the Republic Act 9497, otherwise known as the Civil Aviation Authority Act of 2008 and in accordance with the Board Resolution No.: 2012-054 dated 28 September 2012, I hereby approve the following amendments to the Philippine Civil Aviation Regulations – Air Navigation Services (CAR-ANS) Part 3.

ORIGINAL REGULATION SUBJECT FOR REVIEW AND REVISION:

CIVIL AVIATION REGULATIONS – AIR NAVIGATION SERVICES PART 3

CIVIL AVIATION REGULATIONS
AIR NAVIGATION SERVICES
PART 3

GOVERNING

AERONAUTICAL METEOROLOGICAL SERVICE

CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA ROAD, PASAY CITY 1300, METRO MANILA

(Editorial Note: This will be the new cover page of CAR-ANS Part 3)

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FOREWORD

~~This Civil Aviation Regulations-Air Navigation Services (CAR-ANS) Part 3 was formulated and issued by the Civil Aviation Authority of the Philippines (CAAP), providing the standard rules and regulations for the provision of Aeronautical Meteorological Service.~~

~~This Civil Aviation Regulations-Air Navigation Services (CAR-ANS) Part 3 was developed based on the Standards and Recommended Practices prescribed by the International Civil Aviation Organization (ICAO) as contained in Annex 3 which were first adopted by the Council on 16 April 1948, pursuant to the provisions of Article 37 of the Convention of International Civil Aviation (Chicago 1944), and consequently became applicable on 1 January 1949.~~

Pursuant to the provisions of Article 37 of the convention of International Civil Aviation, the Civil Aviation Authority of the Philippines (CAAP) formulated and issued this Civil Aviation Regulations-Air Navigation Services Part 3 (CAR-ANS Part 3), establishing rules and regulations relating to Aeronautical Meteorological Service to support safe and effective air navigation.

This CAR-ANS Part 3 was also developed based on the Standards and Recommended Practices prescribed by the International Civil Aviation Organization (ICAO) as contained in Annex 3 – Meteorological Service for International Air Navigation.

Article 38 of the Convention imposed an obligation to the CAAP to notify ICAO of any differences between its national regulations and practices and the International Standards contained in Annex 3 and any amendments thereto, especially when such differences are important for the safety of air navigation.

I. PURPOSE ~~This Civil Aviation Regulations-Air Navigation Services~~ CAR-ANS Part 3 provides the rules and regulations for aeronautical meteorological service aimed to contribute towards the safety, regularity and efficiency of domestic and international air navigation through the supply of meteorological information in accordance with WMO and ICAO SARPs.

II. AUTHORITY The procedures contained herein are issued by authority of the Director General of the Civil Aviation Authority of the Philippines and ~~will~~ shall be complied with by all concerned.

III. APPLICABILITY ~~The rules and~~ This regulation~~s~~ ~~contained in CAR-ANS Part 3~~ shall apply to the appropriate meteorological authority and the following users: operators, flight crew members, air traffic services units, search and rescue services units, airport managements and others concerned with the conduct or development of domestic and international air navigation.

IV. REPEALING PROVISIONS All previous Administrative Orders, Memorandum Circulars or part thereof as they pertain to aeronautical meteorological services which are inconsistent with provisions of this Civil Aviation Regulation are hereby repealed, amended or modified accordingly.

V.SEPARABILITY PROVISIONS The provision of this Civil Aviation Regulations are hereby declared separable. If any portion thereof shall be held invalid or unconstitutional, such invalidity or unconstitutionality shall not affect other provisions which shall be in full force and effect.

~~IV.~~ VI. DISTRIBUTION This Civil Aviation Regulation~~s Air Navigation Services Part 3 will~~ shall be distributed to all air traffic services facilities, meteorological offices, and those involved in flight operations.

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3.1 DEFINITIONS, ABBREVIATIONS AND TERMS USED WITH A LIMITED MEANING

3.1.1 DEFINITIONS

When the following terms are used for Meteorological Service in the Philippines, they have the following meanings:

…

Air-report. A report from an aircraft in flight prepared in conformity with requirements for position, and operational and/or meteorological reporting.

Note.— Details of the AIREP form are given in the ~~PANS-ATM (Doc 4444)~~ MOS-ATS.

…

Control area (CTA). A controlled airspace extending upwards from a specified limit above the earth.

…

Flight information center (FIC). A unit established to provide flight information service and alerting service.

…

Flight information region (FIR). An airspace of defined dimensions within which flight information service and alerting service are provided.

…

Meteorological watch office (MWO). An office designated to provide information concerning the occurrence or expected occurrence of specified en-route weather and other phenomena in the atmosphere that may affect the safety of aircraft operations within its specified area of responsibility.

…

Navigation specification. A set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined airspace. There are two kinds of navigation specifications:

…

Area navigation (RNAV) specification. A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, e.g. RNAV 5, RNAV 1.

Note 1.— The Performance-based Navigation (PBN) Manual (ICAO Document 9613), Volume II, contains detailed guidance on navigation specifications.

Note 2.— The term RNP as previously defined as "a statement of the navigation performance, necessary for operation within a defined airspace", has been removed from CAR-ANS Part 3 as the concept of RNP has been overtaken by the concept of PBN. The term RNP in CAR-ANS Part 3 is now solely used in context of navigation specifications that require performance monitoring and alerting. E.g. RNP 4 refers to the aircraft and operating requirements, including a 4 NM lateral performance with on board performance monitoring and alerting that are detailed in the PBN Manual (ICAO Document 9613).

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3.1.2 ACRONYMS AND ABBREVIATIONS

AAIIB	Aircraft Accident Investigation and Inquiry Board
AANSOO	Aerodrome and Air Navigation Safety Oversight Office
ACC	Area Control Center
ADMS	Aerodrome Development and Management Service
ADS-C	Automatic Dependent Surveillance – Contract
AFS	Aeronautical Fixed Service
AFTN	Aeronautical Fixed Telecommunication Network
AIP	Aeronautical Information Publication
AIRMET	Airmen's Meteorological Information
AIS	Aeronautical Information Services
AMSL	Above Mean Sea Level
ANS	Air Navigation Service
ATIS	Automatic Terminal Information Service
ATMSID	Air Traffic Management Safety Inspectorate Division
ATS	Air Traffic Services
CAAP	Civil Aviation Authority of the Philippines
CAR	Civil Aviation Regulations
CAR-ANS	Civil Aviation Regulations – Air Navigation Services
CAVOK	Cloud and Visibility OK
CTA	Control Area
D-ATIS	Data Link - Automatic Terminal Information Service
D-FIS	Data Link – Flight Information Service
DILG	Department of Interior and Local Government
D-METAR	Data Link – Aerodrome Routine Meteorological Report Service
DSWD	Department of Social Welfare and Development
D-TAF	Data Link – Aerodrome Forecast Service
ELS	Enforcement and Legal Service
FIC	Flight Information Center
FIR	Flight Information Region
FSIS	Flight Standard Inspectorate Service
GAMET	General Aviation Meteorological Forecast
IAVW	International airways volcano watch
ICACS	International Civil Aviation Coordinating Staff
ICAO	International Civil Aviation Organization
ISO	International Organization for Standardization
IWXXM	ICAO meteorological information exchange model
METAR	Meteorological Terminal Air Report
MSL	Mean Sea Level
MWO	Meteorological Watch Office
NOTAM	Notice to Airmen
OPMET	Operational Meteorological Information
PAGASA	Philippine Atmospheric, Geophysical and Astronomical Services Administration
PBN	Performance – Based Navigation
PHIVOLCS	Philippine Institute of Volcanology and Seismology
RNAV	Area Navigation
RNP	Required Navigation Performance

RRC	Regulations Review Committee
RSSD	Regulatory Safety Standards Division
RVR	Runway Visual Range
SIGMET	Significant Meteorological Information
SPECI	Special Meteorological Reports
SSPO	State Safety Programme Office
SSR	Secondary Surveillance Radar
SWXC	Space Weather Center
TAF	Terminal Area Forecast
TCAC	Tropical Cyclone Advisory Center
UP-ONAR	U.P. Law Center - Office of the National Administrative Register
UTC	Universal Time Coordinated
VAAC	Volcanic Ash Advisory Center
WAFC	World Area Forecast Center
WAFS	World Area Forecast Stem
WMO	World Meteorological Organization

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3.1.4 RULES OF CONSTRUCTION

Terminology

Through this regulation the following word usage applies:

a) ***Shall*** indicate a mandatory requirement.
b) ***May*** indicates that discretion can be used when performing an act described in a regulation.
c) ***Will*** indicates an action incumbent upon the Authority.

3.1.5 AMENDMENT/REVISION TO CAR-ANS PART 3

Proposals for any amendment or revision to CAR-ANS Part 3 shall be submitted to the Technical Working Group (TWG) of the Air Traffic Management Safety Inspectorate Division (ATMSID). Whether it is an ICAO Annex 3 adopted amendment or any amendment or revision initiated by CAAP or by any other aviation stakeholders, the ATMSID TWG shall submit the deliberated proposal to the Regulations Review Committee (RRC) for furtherance.

The RRC shall be composed of the Director General, the Chiefs of Offices of the Flight Standards Inspectorate Service (FSIS), the Aerodrome and Air Navigation Safety Oversight Office (AANSOO), Air Traffic Services (ATS), Air Navigation Service (ANS), Aerodrome Development and Management Service (ADMS), the International Civil Aviation Coordinating Staff (ICACS)**,** Enforcement and Legal Service (ELS), and representative from State Safety Programme Office (SSPO).

The Chairman of the RRC shall be the Director General or his authorized representative and the Vice Chairman for CAR -ANS Part 3 related matters shall be the Chief of AANSOO. The Secretariat of the RRC on matters concerning CAR-ANS Part 3 shall be the current Chief of the Regulatory Safety Standards Division (RSSD) of AANSOO.

The RRC shall follow the procedures prescribed in the Regulations Amendment/ Revision Procedure (RAP) in deciding on the amendment or revision to or any other proposals associated with it. Once the amendment or revision is reviewed and endorsed by the RRC for the approval

of the Director General, it shall be published in the Official Gazette of the Philippines or in a newspaper of general circulation. A copy of this published amendment/revision to regulations must be filed to the U.P. Law Center - Office of the National Administrative Register (UP-ONAR).

The Chairman of the RRC shall convene the committee for a meeting or at the instance of the Chairman or Vice-Chairman and follow the Internal Rules of Procedures prescribed in the RAP.

3.2 GENERAL PROVISIONS

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3.2.2 Supply, quality assurance and use of meteorological information

…

3.2.2.7 Owing to the variability of meteorological elements in space and time, to limitations of observing techniques and to limitations caused by the definitions of some of the elements, the specific value of any of the elements given in a report shall be understood by the recipient to be the best approximation to the actual conditions at the time of observation.

Note.- Guidance on the operationally desirable accuracy of measurement or observation is given in Manual of Standards for Aeronautical Meteorology (MOS-MET), Attachment ~~3~~A.

…

3.3 GLOBAL SYSTEMS, SUPPORTING CENTERS AND METEOROLOGICAL OFFICES

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3.3.1 Aerodrome meteorological offices

…

3.3.2 Meteorological watch offices

…

3.3.2.4 An MWO shall coordinate SIGMET with neighboring MWO(s), especially when the en-route weather phenomenon extends or is expected to extend beyond the MWO's specified area of responsibility, in order to ensure *the provision of harmonized SIGMET.*

Note.— Guidance on the bilateral or multilateral coordination between MWOs of Contracting States for the provision of SIGMET can be found in the Manual of Aeronautical Meteorological Practice (ICAO Document 8896).

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3.3.3 Philippine volcano observatories

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Note 2.-Handbook on the International Airways Volcano Watch (IAVW) (ICAO Document 9766) contains guidance material about active or potentially active volcanoes.

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3.4 METEOROLOGICAL OBSERVATIONS AND REPORTS

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3.4.1 Aeronautical meteorological stations and observations

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3.4.1.4 The Philippines shall arrange for its aeronautical meteorological stations to be inspected at sufficiently frequent intervals to ensure that a high standard of observations is maintained, that instruments and all their indicators are functioning correctly, and to check whether the exposure of the instruments has changed significantly.

Note.— Guidance on the inspection of aeronautical meteorological stations including the frequency of inspections is given in the Manual on Automatic Meteorological Observing Systems at Aerodromes (ICAO Document 9837).

…

3.4.1.5 At aerodromes with runways intended for Category II and III instrument approach and landing operations, automated equipment for measuring or assessing, as appropriate, and for monitoring and remote indicating of surface wind, visibility, runway visual range, height of cloud base, air and dew-point temperatures and atmospheric pressure shall be installed to support approach and landing and take-off operations. These devices shall be integrated automatic systems for acquisition, processing, dissemination and display in real time of the meteorological parameters affecting landing and take-off operations. The design of integrated automatic systems shall observe Human Factors principles and include back-up procedures.

…

Note 2.— Guidance material on the application of Human Factors principles can be found in the Human Factors Training Manual (ICAO Document 9683).

3.4.1.6 At aerodromes with runways intended for Category I instrument approach and landing operations, automated equipment for measuring or assessing, as appropriate, and for monitoring and remote indicating of surface wind, visibility, runway visual range, height of cloud base, air and dew-point temperatures and atmospheric pressure shall be installed to support approach and landing and take-off operations. These devices shall be integrated automatic systems for acquisition, processing, dissemination and display in real time of the meteorological parameters affecting landing and take-off operations. The design of integrated automatic systems ~~should~~ shall observe Human Factors principles and include back-up procedures.

…

3.4.1.9 Owing to the variability of meteorological elements in space and time, to limitations of observing techniques and to limitations caused by the definitions of some of the elements, the specific value of any of the elements given in a report shall be understood by the recipient to be the best approximation to the actual conditions at the time of observation.

Note.— Guidance on the operationally desirable accuracy of measurement or observation is given in ~~CAR-ANS Part 3~~, MOS-MET, Attachment ~~3~~.A.

…

3.4.6 Observing and reporting meteorological elements

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3.4.6.3 Runway visual range

Note.— Guidance on the subject of runway visual range is contained in the Manual of Runway Visual Range Observing and Reporting Practices (ICAO Document 9328).

…

3.4.7 Reporting of meteorological information from automatic observing systems

…

3.4.7.1 METAR and SPECI from automatic observing systems shall only be used during non-operational hours of the aerodrome, and during operational hours of the aerodrome as determined by the meteorological authority in consultation with users based on the availability and efficient use of personnel.

Note.— Guidance on the use of automatic meteorological observing systems is given in the Manual on Automatic Meteorological Observing Systems at Aerodromes *(ICAO Document 9837).*

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3.8 AERONAUTICAL CLIMATOLOGICAL INFORMATION

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3.8.1 General provisions

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3.8.1.1 Aeronautical climatological information required for the planning of flight operations shall be prepared in the form of aerodrome climatological tables and aerodrome climatological summaries. Such information shall be supplied to aeronautical users as agreed between the meteorological authority and the user concerned.

Note.— Climatological data required for aerodrome planning purposes are set out in ~~CAR-ANS Part 3~~ MOS-MET, Attachment ~~3.~~A.

…

3.11 REQUIREMENTS FOR AND USE OF COMMUNICATIONS

…

3.11.1.9 The telecommunications facilities used for the exchange of operational meteorological information shall be the aeronautical fixed service or, for the exchange of non-time critical operational meteorological information, the public Internet, subject to availability, satisfactory operation and bilateral/multilateral and/or regional air navigation agreements.

…

Note 2. — Guidance material on non-time-critical operational meteorological information and relevant aspects of the public Internet is provided in the Guidelines on the Use of the Public Internet for Aeronautical Applications (ICAO Document 9855).

…

3.11.5 Use of aeronautical data link service — contents of D-VOLMET

D-VOLMET shall contain current METAR and SPECI, together with trend forecasts where available, TAF and SIGMET, special air-reports not covered by a SIGMET and, where available, AIRMET.

Note.— The requirement to provide METAR and SPECI may be met by the data link-flight information service (D-FIS) application entitled "Data link-aerodrome routine meteorological report (D-METAR) service"; the requirement to provide TAF may be met by the D-FIS application entitled "Data link-aerodrome forecast (D-TAF) service"; and the requirement to provide SIGMET and AIRMET messages may be met by the D-FIS application entitled "Data link-SIGMET (DSIGMET) service". The details of these data link services are specified in the Manual of Air Traffic Services Data Link Applications *(ICAO Document 9694).*

…

APPENDIX 3.2 TECHNICAL SPECIFICATIONS RELATED TO GLOBAL SYSTEMS, SUPPORTING CENTERS AND METEOROLOGICAL OFFICES

(See CAR-ANS 3.3.)

1.1 Significant weather (SIGWX) forecasts

1.2 General provisions

…

1.2.3 As of 4 November 2021, in addition to 1.2.2, SIGWX forecasts shall be disseminated in IWXXM GML form.

Note 1.— Guidance on the implementation of IWXXM is provided in the Manual on the ICAO Meteorological Information Exchange Model (IWXXM) (ICAO Document 10003).

…

2. AERODROME METEOROLOGICAL OFFICES

…

2.2 Notification of WAFC concerning significant discrepancies

Aerodrome meteorological offices using WAFS BUFR or, as of 4 November 2021, IWXXM data shall notify the WAFC concerned immediately if significant discrepancies are detected or reported in respect of WAFS SIGWX forecasts concerning:

…

Note.— Guidance on reporting significant discrepancies is provided in the Manual of Aeronautical Meteorological Practice *(ICAO Document 8896).*

…

3. STATE VOLCANO OBSERVATORIES

3.1 Information from State volcano observatories

The information required to be sent by State volcano observatories to their associated ACCs/FICs, MWO and VAAC shall comprise:

…

Note 2.— PHILVOLCS may use the Volcano Observatory Notice for Aviation (VONA) format to send information to their associated ACCs/FICs, MWO and VAAC. The VONA format is included in the Handbook on the International Airways Volcano Watch (IAVW) – Operational Procedures and Contact List (ICAO Document 9766) which is available on the ICAO IAVWOPSG website.

…

APPENDIX 3.3 TECHNICAL SPECIFICATIONS RELATED TO METEOROLOGICAL OBSERVATIONS AND REPORTS

(See CAR-ANS 3.4.)

…

1.GENERAL PROVISIONS RELATED TO METEOROLOGICAL OBSERVATIONS

…

2. GENERAL CRITERIA RELATED TO METEOROLOGICAL REPORTS

2.1 Format of meteorological reports

…

2.1.3 METAR and SPECI shall be disseminated in IWXXM GML form in addition to the dissemination of the METAR and SPECI in accordance with 2.1.2.

Note 1.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO-No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the implementation of IWXXM is provided in the Manual on the ICAO Meteorological Information Exchange Model (IWXXM) (ICAO Document 10003).

…

2.3 Criteria for issuance of local special reports and SPECI

2.3.1 The list of criteria for the issuance of local special reports shall include the following:

…

e) when noise abatement procedures are applied in accordance with the ~~PANS-ATM (Doc 4444)~~ Manual of Standards for Air Traffic Services (MOS-ATS) and the variation from the mean surface wind speed (gusts) has changed by 2.5 m/s (5 kt) or more from that at the time of the latest report, the mean speed before and/or after the change being 7.5 m/s (15 kt) or more; and

…

4. OBSERVING AND REPORTING OF METEOROLOGICAL ELEMENTS

Introductory Note. — Selected criteria applicable to meteorological information referred to under 4.1 to 4.8 for inclusion in aerodrome reports are given in tabular form at MOS-MET, Attachment C ~~to CAR-ANS Part 3~~.

4.1 Surface wind

…

4.1.5.2 In local routine reports, local special reports, and in METAR and SPECI:

a) the units of measurement used for the wind speed shall be indicated;

…

c) variations from the mean wind speed (gusts) during the past 10 minutes shall be reported when the maximum wind speed exceeds the mean speed by:

1) 2.5 m/s (5 kt) or more in local routine and special reports when noise abatement procedures are applied in accordance with ~~paragraph 7.2.7 of the PANS-ATM (Doc 4444)~~ MOS-ATS; or

…

4.1.4 Accuracy of measurement

The reported direction and speed of the mean surface wind, as well as variations from the mean surface wind, shall meet the operationally desirable accuracy of measurement as given in MOS-MET, Attachment A. ~~to CAR-ANS Part 3.~~

…

4.3 Runway visual range

4.3.1 Siting

…

4.3.2 Instrumented systems

*Note.— Since accuracy can vary from one instrument design to another, performance characteristics are to be checked before selecting an instrument for assessing runway visual range. The calibration of a forward-scatter meter has to be traceable and verifiable to a transmissometer standard, the accuracy of which has been verified over the intended operational range. Guidance on the use of transmissometers and forward-scatter meters in instrumented runway visual range systems is given in the Manual of Runway Visual Range Observing and Reporting Practices (*ICAO Document *9328).*

…

4.3.5 Runway light intensity

When instrumented systems are used for the assessment of runway visual range, computations shall be made separately for each available runway. Runway visual range shall not be computed for a light intensity of 3 per cent or less of the maximum light intensity available on a runway. For local routine and special reports, the light intensity to be used for the computation shall be:

…

Note.— Guidance on the conversion of instrumented readings into runway visual range is given at MOS-MET, Attachment ~~3.~~D ~~to CAR-ANS Part~~.

…

4.4 Present weather

…

4.4.2.5 In local routine reports, local special reports, METAR and SPECI, the following characteristics of present weather phenomena, as necessary, shall be reported, using their respective abbreviations and relevant criteria, as appropriate:

…

Freezing
— Supercooled water droplets or precipitation, used with types of present weather phenomena in accordance with the templates shown in Tables A3.3-1 and A3.3-2.

Note.— At aerodromes with human observers, lightning detection equipment may supplement human observations. For aerodromes with automatic observing systems, guidance on the use of lightning detection equipment intended for thunderstorm reporting is given in the Manual on Automatic Meteorological Observing Systems at Aerodromes *(*ICAO Document *9837).*

…

Table A3.3-1. Template for the local routine (MET REPORT) and local special (SPECIAL) reports

…

Note 2.— The explanations for the abbreviations can be found in the Procedures for Air Navigation Services — ICAO Abbreviations and Codes *(PANS-ABC, ICAO Document 8400).*

…

~~**Table A3-2. Template for METAR and SPECI**~~
~~**(applicable until 3 November 2021)**~~

Editorial Note: Delete Table A3-2 Template for METAR and SPECI

…

Table A3.3-2. Template for METAR and SPECI
(applicable as of 5 November 202~~0~~1)

…

Note 2.— The explanations for the abbreviations can be found in the Procedures for Air Navigation Services — ICAO Abbreviations and Codes *(PANS-ABC, ICAO Document 8400).*

…

APPENDIX 3.4. TECHNICAL SPECIFICATIONS RELATED TO AIRCRAFT OBSERVATIONS AND REPORTS
(See CAR-ANS 3.5.)

1. CONTENTS OF AIR-REPORTS

1.1 Routine air-reports by air-ground data link

1.1.1 When air-ground data link is used and automatic dependent surveillance contract (ADS-C) or SSR Mode S is being applied, the elements contained in routine air-reports shall be:

…

Note.— When ADS-C or SSR Mode S is being applied, the requirements of routine air-reports may be met by the combination of the basic ADS-C/SSR Mode S data block (data block 1) and the meteorological information data block (data block 2), available from ADS-C or SSR Mode S reports. The ADS-C message format is specified in the ~~PANS-ATM (Doc 4444),~~ MOS-ATS ~~4.11.4~~ 4.12.4 and Chapter 13 and the SSR Mode S message format is specified in CAR-ANS Part 7 — Standards for Digital Data Communication Systems*, 7.5.*

1.2 Special air-reports by air-ground data link.

When air-ground data link is used, the elements contained in special air-reports shall be:

…

Note 1.— The requirements of special air-reports may be met by the data link flight information service (D-FIS) application entitled "Special air-report service". The details of this data link application are specified in ICAO Document 9694.

1.3 Special air-reports by voice communications

When voice communications are used, the elements contained in special air reports shall be:

…

Note 1.— Air-reports are considered routine by default. The message type designator for special air-reports is specified in the ~~PANS-ATM (Doc 4444)~~ MOS-ATS, Appendix 1.

…

4. SPECIFIC PROVISIONS RELATED TO REPORTING WIND SHEAR AND VOLCANIC ASH

…

4.2 Post-flight reporting of volcanic activity

Note.— The detailed instructions for recording and reporting volcanic activity observations are given in the ~~PANS-ATM (Doc 4444)~~ MOS-ATS, Appendix 1.

…

APPENDIX 3.5. TECHNICAL SPECIFICATIONS RELATED TO FORECASTS
(See CAR-ANS 3.6.)

1. CRITERIA RELATED TO TAF

1.1 TAF format

…

1.1.2 TAF shall be disseminated in IWXXM GML form in addition to the dissemination of the TAF in accordance with 1.1.1.

Note 1.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO-No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the implementation of IWXXM is provided in Manual on the ICAO Meteorological Information Exchange Model (IWXXM) (ICAO Document 10003).

…

1.2 Inclusion of meteorological elements in TAF

Note.— Guidance on operationally desirable accuracy of forecasts is given in MOS-MET, Attachment ~~3~~.B.

…

4.4 Exchange of area forecasts for low-level flights

Area forecasts for low-level flights prepared in support of the issuance of AIRMET information shall be exchanged between aerodrome meteorological offices and/or meteorological watch offices responsible for the issuance of flight documentation for low-level flights in the flight information regions concerned.

Table A3.5-1. Template for TAF

…

Note 2.— The explanations for the abbreviations can be found in the Procedures for Air Navigation Services — ICAO Abbreviations and Codes *(PANS-ABC, ICAO Document 8400).*

…

APPENDIX 3.6. TECHNICAL SPECIFICATIONS RELATED TO SIGMET AND AIRMET INFORMATION, AERODROME WARNINGS AND WIND SHEAR WARNINGS AND ALERTS
(See CAR-ANS 3.7.)

1. SPECIFICATIONS RELATED TO SIGMET INFORMATION

1.1 Format of SIGMET messages

…

1.1.6 SIGMET information shall be disseminated in IWXXM GML form in addition to the dissemination of SIGMET information in accordance with 1.1.1.

Note 1.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO-No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the implementation of IWXXM is provided in the Manual on the ICAO Meteorological Information Exchange Model (IWXXM) (ICAO Document 10003).

…

2. SPECIFICATIONS RELATED TO AIRMET INFORMATION

2.1 Format of AIRMET messages

…

2.1.6 AIRMET information shall be disseminated in IWXXM GML form in addition to the dissemination of AIRMET information in accordance with 2.1.1.

Note 1.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO-No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the implementation of IWXXM is provided in the Manual on the ICAO Meteorological information Exchange Model (IWXXM) (ICAO Document 10003).

…

Table A3.6-2. Template for aerodrome warnings

…

Note 2.— The explanations for the abbreviations can be found in the Procedures for Air Navigation Services — ICAO Abbreviations and Codes *(PANS-ABC, ICAO Document 8400).*

…

Table A3.6-3. Template for wind shear warnings

…

Note 2.— The explanations for the abbreviations can be found in the Procedures for Air Navigation Services — ICAO Abbreviations and Codes *(PANS-ABC, ICAO Document 8400).*

…

APPENDIX 3.8. TECHNICAL SPECIFICATIONS RELATED TO SERVICE FOR OPERATORS AND FLIGHT CREW MEMBERS

(See CAR-ANS 3.9.)

…

2. SPECIFICATIONS RELATED TO INFORMATION FOR PRE-FLIGHT PLANNING AND IN-FLIGHT RE-PLANNING

…

2.2 Format of information on significant weather

…

2.2.2 As of 4 November 2021, in addition to 2.2.1, information on significant weather supplied by WAFCs for pre-flight planning and in-flight replanning shall be in IWXXM GML form.

Note 1.— The technical specifications for IWXXM are contained in the Manual on Codes *(WMO-No. 306), Volume I.3, Part D —* Representation Derived from Data Models. *Guidance on the implementation of IWXXM is provided in the Manual on the ICAO Meteorological Information Exchange Model (IWXXM) (ICAO Document 10003).*

…

4. SPECIFICATIONS RELATED TO FLIGHT DOCUMENTATION

4.1 Presentation of information

…

4.1.2 The flight documentation related to concatenated route-specific upper wind and upper-air temperature forecasts shall be provided when agreed between the meteorological authority of the Philippines and operator concerned.

Note.-Guidance on the design, formulation and use of concatenated charts is given in the manual of Aeronautical Meteorological Practice (ICAO Document 8896).

…

5. SPECIFICATIONS RELATED TO AUTOMATED PRE-FLIGHT INFORMATION SYSTEMS FOR BRIEFING, CONSULTATION, FLIGHT PLANNING AND FLIGHT DOCUMENTATION

…

5.2 Detailed specifications of the systems

Automated pre-flight information systems for the supply of meteorological information for self-briefing, pre-flight planning and flight documentation shall:

…

d) provide for rapid response to a user request for information.

Note.— ICAO abbreviations and codes and location indicators are given respectively in the Procedures for Air Navigation Services — ICAO Abbreviations and Codes *(PANS-ABC, ICAO Document 8400) and* Location Indicators *(ICAO Document7910). Aeronautical meteorological code data-type designators are given in the WMO Publication No. 386,* Manual on the Global Telecommunication System.

…

6. SPECIFICATIONS RELATED TO INFORMATION FOR AIRCRAFT IN FLIGHT

…

6.2 Information for in-flight planning by the operator

Meteorological information for planning by the operator for aircraft in flight shall be supplied during the period of the flight and shall normally consist of any or all of the following:

…

Note.— Guidance on the display of graphical information in the cockpit is provided in the Manual of Aeronautical Meteorological Practice *(ICAO Document 8896).*

…

APPENDIX 3.10. TECHNICAL SPECIFICATIONS RELATED TO REQUIREMENTS FOR AND USE OF COMMUNICATIONS

(See CAR-ANS 3.11.)

1. SPECIFIC REQUIREMENTS FOR COMMUNICATIONS

…

2. USE OF AERONAUTICAL FIXED SERVICE COMMUNICATIONS AND THE PUBLIC INTERNET

2.1 Meteorological bulletins in alphanumeric format

2.1.3 Heading of bulletins Meteorological bulletins containing operational meteorological information to be transmitted via the aeronautical fixed service or the public Internet shall contain a heading consisting of:

…

Note 1.— Detailed specifications on format and contents of the heading are given in WMO Publication No. 386, Manual on the Global Telecommunication System, *Volume I and are reproduced in the* Manual of Aeronautical Meteorological Practice *(ICAO Document 8896).*

Note 2.— ICAO location indicators are listed in Location Indicators *(ICAO Document 7910).*

…

3. USE OF AERONAUTICAL MOBILE SERVICE COMMUNICATIONS

3.1 Content and format of meteorological messages

…

3.1.2 The content and format of air-reports transmitted by aircraft shall be consistent with the provisions of 3.5 of this CAR-ANS and the ~~*Procedures for Air Navigation Services — Air Traffic Management* (PANS-ATM, Doc 4444)~~ MOS-ATS, Appendix 1.

…

5.3 Format of information to be included in VOLMET broadcasts

…

5.3.2 VOLMET broadcasts shall use standard radiotelephony phraseologies.

Note.— Guidance on the standard radiotelephony phraseologies to be used in VOLMET broadcasts is given in the Manual on Coordination between Air Traffic Services, Aeronautical Information Services and Aeronautical Meteorological Services *(* ICAO Document *9377), Appendix 1.*

…

~~**ATTACHMENT 3.A. OPERATIONALLY DESIRABLE ACCURACY OF MEASUREMENT OR OBSERVATION**~~

…

~~**ATTACHMENT 3.B. OPERATIONALLY DESIRABLE ACCURACY OF FORECASTS**~~

…

~~**ATTACHMENT 3.C. SELECTED CRITERIA APPLICABLE TO AERODROME REPORTS**~~

…

~~**ATTACHMENT 3.D. CONVERSION OF INSTRUMENTEDREADINGS INTO RUNWAY VISUAL RANGE AND VISIBILITY**~~

Editorial Note: Attachments 3A, 3B. 3C and 3D will be deleted in CAR-ANS Part 3 and will be moved to MOS-MET as Attachments A, B, C and D.

-END-

NEW/AMENDED REGULATION AFTER REVISION:

CIVIL AVIATION REGULATIONS – AIR NAVIGATION SERVICES PART 3

…

FOREWORD

Pursuant to the provisions of Article 37 of the convention of International Civil Aviation, the Civil Aviation Authority of the Philippines (CAAP) formulated and issued this Civil Aviation Regulations-Air Navigation Services Part 3 (CAR-ANS Part 3), establishing rules and

regulations relating to Aeronautical Meteorological Service to support safe and effective air navigation.

This CAR-ANS Part 3 was also developed based on the Standards and Recommended Practices prescribed by the International Civil Aviation Organization (ICAO) as contained in Annex 3 – Meteorological Service for International Air Navigation.

Article 38 of the Convention imposed an obligation to the CAAP to notify ICAO of any differences between its national regulations and practices and the International Standards contained in Annex 3 and any amendments thereto, especially when such differences are important for the safety of air navigation.

I. PURPOSE CAR-ANS Part 3 provides the rules and regulations for aeronautical meteorological service aimed to contribute towards the safety, regularity and efficiency of domestic and international air navigation through the supply of meteorological information in accordance with WMO and ICAO SARPs.

II. AUTHORITY The procedures contained herein are issued by authority of the Director General of the Civil Aviation Authority of the Philippines and shall be complied with by all concerned.

III. APPLICABILITY This regulation shall apply to the appropriate meteorological authority and the following users: operators, flight crew members, air traffic services units, search and rescue services units, airport managements and others concerned with the conduct or development of domestic and international air navigation.

IV. REPEALING PROVISIONS All previous Administrative Orders, Memorandum Circulars or part thereof as they pertain to aeronautical meteorological services which are inconsistent with provisions of this Civil Aviation Regulation are hereby repealed, amended or modified accordingly.

V. SEPARABILITY PROVISIONS The provision of this Civil Aviation Regulations are hereby declared separable. If any portion thereof shall be held invalid or unconstitutional, such invalidity or unconstitutionality shall not affect other provisions which shall be in full force and effect.

VI. DISTRIBUTION This Civil Aviation Regulation shall be distributed to all air traffic services facilities, meteorological offices, and those involved in flight operations.

…

3.1 DEFINITIONS, ABBREVIATIONS AND TERMS USED WITH A LIMITED MEANING

3.1.1 DEFINITIONS

When the following terms are used for Meteorological Service in the Philippines, they have the following meanings:

…

Air-report. A report from an aircraft in flight prepared in conformity with requirements for position, and operational and/or meteorological reporting.

Note.— Details of the AIREP form are given in the MOS-ATS.

…

Control area (CTA). A controlled airspace extending upwards from a specified limit above the earth.

…

Flight information center (FIC). A unit established to provide flight information service and alerting service.

…

Flight information region (FIR). An airspace of defined dimensions within which flight information service and alerting service are provided.

…

Meteorological watch office (MWO). An office designated to provide information concerning the occurrence or expected occurrence of specified en-route weather and other phenomena in the atmosphere that may affect the safety of aircraft operations within its specified area of responsibility.

…

Navigation specification. A set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined airspace. There are two kinds of navigation specifications:

…

Area navigation (RNAV) specification. A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, e.g. RNAV 5, RNAV 1.

Note 1.— The Performance-based Navigation (PBN) Manual (ICAO Document 9613), Volume II, contains detailed guidance on navigation specifications.

Note 2.— The term RNP as previously defined as "a statement of the navigation performance, necessary for operation within a defined airspace", has been removed from CAR-ANS Part 3 as the concept of RNP has been overtaken by the concept of PBN. The term RNP in CAR-ANS Part 3 is now solely used in context of navigation specifications that require performance monitoring and alerting. E.g. RNP 4 refers to the aircraft and operating requirements, including a 4 NM lateral performance with on board performance monitoring and alerting that are detailed in the PBN Manual (ICAO Document 9613).

…

3.1.2 ACRONYMS AND ABBREVIATIONS

AAIIB	Aircraft Accident Investigation and Inquiry Board
AANSOO	Aerodrome and Air Navigation Safety Oversight Office
ACC	Area Control Center
ADMS	Aerodrome Development and Management Service
ADS-C	Automatic Dependent Surveillance – Contract
AFS	Aeronautical Fixed Service
AFTN	Aeronautical Fixed Telecommunication Network
AIP	Aeronautical Information Publication
AIRMET	Airmen's Meteorological Information
AIS	Aeronautical Information Services
AMSL	Above Mean Sea Level
ANS	Air Navigation Service
ATIS	Automatic Terminal Information Service
ATMSID	Air Traffic Management Safety Inspectorate Division
ATS	Air Traffic Services
CAAP	Civil Aviation Authority of the Philippines

CAR	Civil Aviation Regulations
CAR-ANS	Civil Aviation Regulations – Air Navigation Services
CAVOK	Cloud and Visibility OK
CTA	Control Area
D-ATIS	Data Link - Automatic Terminal Information Service
D-FIS	Data Link – Flight Information Service
DILG	Department of Interior and Local Government
D-METAR	Data Link – Aerodrome Routine Meteorological Report Service
DSWD	Department of Social Welfare and Development
D-TAF	Data Link – Aerodrome Forecast Service
ELS	Enforcement and Legal Service
FIC	Flight Information Center
FIR	Flight Information Region
FSIS	Flight Standard Inspectorate Service
GAMET	General Aviation Meteorological Forecast
IAVW	International airways volcano watch
ICACS	International Civil Aviation Coordinating Staff
ICAO	International Civil Aviation Organization
ISO	International Organization for Standardization
IWXXM	ICAO meteorological information exchange model
METAR	Meteorological Terminal Air Report
MSL	Mean Sea Level
MWO	Meteorological Watch Office
NOTAM	Notice to Airmen
OPMET	Operational Meteorological Information
PAGASA	Philippine Atmospheric, Geophysical and Astronomical Services Administration
PBN	Performance – Based Navigation
PHIVOLCS	Philippine Institute of Volcanology and Seismology
RNAV	Area Navigation
RNP	Required Navigation Performance
RRC	Regulations Review Committee
RSSD	Regulatory Safety Standards Division
RVR	Runway Visual Range
SIGMET	Significant Meteorological Information
SPECI	Special Meteorological Reports
SSPO	State Safety Programme Office
SSR	Secondary Surveillance Radar
SWXC	Space Weather Center
TAF	Terminal Area Forecast
TCAC	Tropical Cyclone Advisory Center
UP-ONAR	U.P. Law Center - Office of the National Administrative Register
UTC	Universal Time Coordinated
VAAC	Volcanic Ash Advisory Center
WAFC	World Area Forecast Center
WAFS	World Area Forecast Stem
WMO	World Meteorological Organization

…

3.1.4 RULES OF CONSTRUCTION

Terminology

Through this regulation the following word usage applies:

a) ***Shall*** indicate a mandatory requirement.
b) ***May*** indicates that discretion can be used when performing an act described in a regulation.
c) ***Will*** indicates an action incumbent upon the Authority.

3.1.5 AMENDMENT/REVISION TO CAR-ANS PART 3

Proposals for any amendment or revision to CAR-ANS Part 3 shall be submitted to the Technical Working Group (TWG) of the Air Traffic Management Safety Inspectorate Division (ATMSID). Whether it is an ICAO Annex 3 adopted amendment or any amendment or revision initiated by CAAP or by any other aviation stakeholders, the ATMSID TWG shall submit the deliberated proposal to the Regulations Review Committee (RRC) for furtherance.

The RRC shall be composed of the Director General, the Chiefs of Offices of the Flight Standards Inspectorate Service (FSIS), the Aerodrome and Air Navigation Safety Oversight Office (AANSOO), Air Traffic Services (ATS), Air Navigation Service (ANS), Aerodrome Development and Management Service (ADMS), the International Civil Aviation Coordinating Staff (ICACS)**,** Enforcement and Legal Service (ELS), and representative from State Safety Programme Office (SSPO).

The Chairman of the RRC shall be the Director General or his authorized representative and the Vice Chairman for CAR -ANS Part 3 related matters shall be the Chief of AANSOO. The Secretariat of the RRC on matters concerning CAR-ANS Part 3 shall be the current Chief of the Regulatory Safety Standards Division (RSSD) of AANSOO.

The RRC shall follow the procedures prescribed in the Regulations Amendment/ Revision Procedure (RAP) in deciding on the amendment or revision to or any other proposals associated with it. Once the amendment or revision is reviewed and endorsed by the RRC for the approval of the Director General, it shall be published in the Official Gazette of the Philippines or in a newspaper of general circulation. A copy of this published amendment/revision to regulations must be filed to the U.P. Law Center - Office of the National Administrative Register (UP-ONAR).

The Chairman of the RRC shall convene the committee for a meeting or at the instance of the Chairman or Vice-Chairman and follow the Internal Rules of Procedures prescribed in the RAP.

3.2 GENERAL PROVISIONS

…

3.2.2 Supply, quality assurance and use of meteorological information

…

3.2.2.7 Owing to the variability of meteorological elements in space and time, to limitations of observing techniques and to limitations caused by the definitions of some of the elements, the specific value of any of the elements given in a report shall be understood by the recipient to be the best approximation to the actual conditions at the time of observation.

Note.- Guidance on the operationally desirable accuracy of measurement or observation is given in Manual of Standards for Aeronautical Meteorology (MOS-MET), Attachment A.

…

3.3 GLOBAL SYSTEMS, SUPPORTING CENTERS AND METEOROLOGICAL OFFICES

…

3.3.1 Aerodrome meteorological offices

…

3.3.2 Meteorological watch offices

…

3.3.2.4 An MWO shall coordinate SIGMET with neighboring MWO(s), especially when the en-route weather phenomenon extends or is expected to extend beyond the MWO's specified area of responsibility, in order to ensure *the provision of harmonized SIGMET.*

Note.— Guidance on the bilateral or multilateral coordination between MWOs of Contracting States for the provision of SIGMET can be found in the Manual of Aeronautical Meteorological Practice (ICAO Document 8896).

…

3.3.3 Philippine volcano observatories

…

Note 2.-Handbook on the International Airways Volcano Watch (IAVW) (ICAO Document 9766) contains guidance material about active or potentially active volcanoes.

…

3.4 METEOROLOGICAL OBSERVATIONS AND REPORTS

…

3.4.1 Aeronautical meteorological stations and observations

…

3.4.1.4 The Philippines shall arrange for its aeronautical meteorological stations to be inspected at sufficiently frequent intervals to ensure that a high standard of observations is maintained, that instruments and all their indicators are functioning correctly, and to check whether the exposure of the instruments has changed significantly.

Note.— Guidance on the inspection of aeronautical meteorological stations including the frequency of inspections is given in the Manual on Automatic Meteorological Observing Systems at Aerodromes (ICAO Document 9837).

…

3.4.1.5 At aerodromes with runways intended for Category II and III instrument approach and landing operations, automated equipment for measuring or assessing, as appropriate, and for monitoring and remote indicating of surface wind, visibility, runway visual range, height of cloud base, air and dew-point temperatures and atmospheric pressure shall be installed to support approach and landing and take-off operations. These devices shall be integrated automatic systems for acquisition, processing, dissemination and display in real time of the meteorological parameters affecting landing and take-off operations. The design of integrated automatic systems shall observe Human Factors principles and include back-up procedures.

…

Note 2.— Guidance material on the application of Human Factors principles can be found in the Human Factors Training Manual (ICAO Document 9683).

3.4.1.6 At aerodromes with runways intended for Category I instrument approach and landing operations, automated equipment for measuring or assessing, as appropriate, and for monitoring and remote indicating of surface wind, visibility, runway visual range, height of cloud base, air and dew-point temperatures and atmospheric pressure shall be installed to

support approach and landing and take-off operations. These devices shall be integrated automatic systems for acquisition, processing, dissemination and display in real time of the meteorological parameters affecting landing and take-off operations. The design of integrated automatic systems shall observe Human Factors principles and include back-up procedures.

…

3.4.1.9 Owing to the variability of meteorological elements in space and time, to limitations of observing techniques and to limitations caused by the definitions of some of the elements, the specific value of any of the elements given in a report shall be understood by the recipient to be the best approximation to the actual conditions at the time of observation.

Note.— Guidance on the operationally desirable accuracy of measurement or observation is given in MOS-MET, Attachment A.

…

3.4.6 Observing and reporting meteorological elements

…

3.4.6.3 Runway visual range

Note.— Guidance on the subject of runway visual range is contained in the Manual of Runway Visual Range Observing and Reporting Practices (ICAO Document 9328).

…

3.4.7 Reporting of meteorological information from automatic observing systems

…

3.4.7.1 METAR and SPECI from automatic observing systems shall only be used during non-operational hours of the aerodrome, and during operational hours of the aerodrome as determined by the meteorological authority in consultation with users based on the availability and efficient use of personnel.

Note.— Guidance on the use of automatic meteorological observing systems is given in the Manual on Automatic Meteorological Observing Systems at Aerodromes *(ICAO Document 9837).*

…

3.8 AERONAUTICAL CLIMATOLOGICAL INFORMATION

…

3.8.1 General provisions

…

3.8.1.1 Aeronautical climatological information required for the planning of flight operations shall be prepared in the form of aerodrome climatological tables and aerodrome climatological summaries. Such information shall be supplied to aeronautical users as agreed between the meteorological authority and the user concerned.

Note.— Climatological data required for aerodrome planning purposes are set out MOS-MET, Attachment A.

…

3.11 REQUIREMENTS FOR AND USE OF COMMUNICATIONS

…

3.11.1.9 The telecommunications facilities used for the exchange of operational meteorological information shall be the aeronautical fixed service or, for the exchange of non-time critical operational meteorological information, the public Internet, subject to availability, satisfactory operation and bilateral/multilateral and/or regional air navigation agreements.

…

Note 2. — Guidance material on non-time-critical operational meteorological information and relevant aspects of the public Internet is provided in the Guidelines on the Use of the Public Internet for Aeronautical Applications (ICAO Document 9855).

…

3.11.5 Use of aeronautical data link service — contents of D-VOLMET

D-VOLMET shall contain current METAR and SPECI, together with trend forecasts where available, TAF and SIGMET, special air-reports not covered by a SIGMET and, where available, AIRMET.

Note.— The requirement to provide METAR and SPECI may be met by the data link-flight information service (D-FIS) application entitled "Data link-aerodrome routine meteorological report (D-METAR) service"; the requirement to provide TAF may be met by the D-FIS application entitled "Data link-aerodrome forecast (D-TAF) service"; and the requirement to provide SIGMET and AIRMET messages may be met by the D-FIS application entitled "Data link-SIGMET (DSIGMET) service". The details of these data link services are specified in the Manual of Air Traffic Services Data Link Applications *(ICAO Document 9694)*.

…

APPENDIX 3.2 TECHNICAL SPECIFICATIONS RELATED TO GLOBAL SYSTEMS, SUPPORTING CENTERS AND METEOROLOGICAL OFFICES
(See CAR-ANS 3.3.)

1.1 Significant weather (SIGWX) forecasts

1.2 General provisions

…

1.2.3 As of 4 November 2021, in addition to 1.2.2, SIGWX forecasts shall be disseminated in IWXXM GML form.

Note 1.— Guidance on the implementation of IWXXM is provided in the Manual on the ICAO Meteorological Information Exchange Model (IWXXM) (ICAO Document 10003).

…

2. AERODROME METEOROLOGICAL OFFICES

…

2.2 Notification of WAFC concerning significant discrepancies

Aerodrome meteorological offices using WAFS BUFR or, as of 4 November 2021, IWXXM data shall notify the WAFC concerned immediately if significant discrepancies are detected or reported in respect of WAFS SIGWX forecasts concerning:

…

Note.— Guidance on reporting significant discrepancies is provided in the Manual of Aeronautical Meteorological Practice *(ICAO Document 8896).*

…

3. STATE VOLCANO OBSERVATORIES

3.1 Information from State volcano observatories

The information required to be sent by State volcano observatories to their associated ACCs/FICs, MWO and VAAC shall comprise:

…

Note 2.— PHILVOLCS may use the Volcano Observatory Notice for Aviation (VONA) format to send information to their associated ACCs/FICs, MWO and VAAC. The VONA format is

included in the Handbook on the International Airways Volcano Watch (IAVW) – Operational Procedures and Contact List (ICAO Document 9766) which is available on the ICAO IAVWOPSG website.

…

APPENDIX 3.3 TECHNICAL SPECIFICATIONS RELATED TO METEOROLOGICAL OBSERVATIONS AND REPORTS

(See CAR-ANS 3.4.)

…

1.GENERAL PROVISIONS RELATED TO METEOROLOGICAL OBSERVATIONS

…

2. GENERAL CRITERIA RELATED TO METEOROLOGICAL REPORTS

2.1 Format of meteorological reports

…

2.1.3 METAR and SPECI shall be disseminated in IWXXM GML form in addition to the dissemination of the METAR and SPECI in accordance with 2.1.2.

Note 1.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO-No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the implementation of IWXXM is provided in the Manual on the ICAO Meteorological Information Exchange Model (IWXXM) (ICAO Document 10003).

…

2.3 Criteria for issuance of local special reports and SPECI

2.3.1 The list of criteria for the issuance of local special reports shall include the following:

…

e) when noise abatement procedures are applied in accordance with the Manual of Standards for Air Traffic Services (MOS-ATS) and the variation from the mean surface wind speed (gusts) has changed by 2.5 m/s (5 kt) or more from that at the time of the latest report, the mean speed before and/or after the change being 7.5 m/s (15 kt) or more; and

…

4. OBSERVING AND REPORTING OF METEOROLOGICAL ELEMENTS

Introductory Note. — Selected criteria applicable to meteorological information referred to under 4.1 to 4.8 for inclusion in aerodrome reports are given in tabular form at MOS-MET, Attachment C.

4.1 Surface wind

…

4.1.5.2 In local routine reports, local special reports, and in METAR and SPECI:

a) the units of measurement used for the wind speed shall be indicated;

…

c) variations from the mean wind speed (gusts) during the past 10 minutes shall be reported when the maximum wind speed exceeds the mean speed by:

1) 2.5 m/s (5 kt) or more in local routine and special reports when noise abatement procedures are applied in accordance with MOS-ATS; or

…

4.1.4 Accuracy of measurement

The reported direction and speed of the mean surface wind, as well as variations from the mean surface wind, shall meet the operationally desirable accuracy of measurement as given in MOS-MET, Attachment A.

…

4.3 Runway visual range

4.3.1 Siting

…

4.3.2 Instrumented systems

*Note.— Since accuracy can vary from one instrument design to another, performance characteristics are to be checked before selecting an instrument for assessing runway visual range. The calibration of a forward-scatter meter has to be traceable and verifiable to a transmissometer standard, the accuracy of which has been verified over the intended operational range. Guidance on the use of transmissometers and forward-scatter meters in instrumented runway visual range systems is given in the Manual of Runway Visual Range Observing and Reporting Practices (*ICAO Document *9328).*

…

4.3.5 Runway light intensity

When instrumented systems are used for the assessment of runway visual range, computations shall be made separately for each available runway. Runway visual range shall not be computed for a light intensity of 3 per cent or less of the maximum light intensity available on a runway. For local routine and special reports, the light intensity to be used for the computation shall be:

…

Note.— Guidance on the conversion of instrumented readings into runway visual range is given at MOS-MET, Attachment D.

…

4.4 Present weather

…

4.4.2.5 In local routine reports, local special reports, METAR and SPECI, the following characteristics of present weather phenomena, as necessary, shall be reported, using their respective abbreviations and relevant criteria, as appropriate:

…

Freezing

— Supercooled water droplets or precipitation, used with types of present weather phenomena in accordance with the templates shown in Tables A3.3-1 and A3.3-2.

Note.— At aerodromes with human observers, lightning detection equipment may supplement human observations. For aerodromes with automatic observing systems, guidance on the use of lightning detection equipment intended for thunderstorm reporting is given in the Manual on Automatic Meteorological Observing Systems at Aerodromes *(ICAO Document 9837).*

…

Table A3.3-1. Template for the local routine (MET REPORT) and local special (SPECIAL) reports

…

Note 2.— The explanations for the abbreviations can be found in the Procedures for Air Navigation Services — ICAO Abbreviations and Codes *(PANS-ABC, ICAO Document 8400).*

…

Table A3.3-2. Template for METAR and SPECI
(applicable as of 5 November 2021)

…

Note 2.— The explanations for the abbreviations can be found in the Procedures for Air Navigation Services — ICAO Abbreviations and Codes *(PANS-ABC, ICAO Document 8400).*

…

APPENDIX 3.4. TECHNICAL SPECIFICATIONS RELATED TO AIRCRAFT OBSERVATIONS AND REPORTS

(See CAR-ANS 3.5.)

1. CONTENTS OF AIR-REPORTS

1.1 Routine air-reports by air-ground data link

1.1.1 When air-ground data link is used and automatic dependent surveillance contract (ADS-C) or SSR Mode S is being applied, the elements contained in routine air-reports shall be:

…

Note.— When ADS-C or SSR Mode S is being applied, the requirements of routine air-reports may be met by the combination of the basic ADS-C/SSR Mode S data block (data block 1) and the meteorological information data block (data block 2), available from ADS-C or SSR Mode S reports. The ADS-C message format is specified in the MOS-ATS 4.12.4 and Chapter 13 and the SSR Mode S message format is specified in CAR-ANS Part 7 — Standards for Digital Data Communication Systems*, 7.5.*

1.1.2 When air-ground data link is used while ADS-C and SSR Mode S are not being applied, the elements contained in routine reports shall be:

Note.— When air-ground data link is used while ADS-C and SSR Mode S are not being applied, the requirements of routine air-reports may be met by the controller-pilot data link communication (CPDLC) application entitled "Position report". The details of this data link application are specified in the Manual of Air Traffic Services Data Link Applications *(ICAO Document 9694) and in CAR-ANS Part 7.*

1.2 Special air-reports by air-ground data link.

When air-ground data link is used, the elements contained in special air-reports shall be:

…

Note 1.— The requirements of special air-reports may be met by the data link flight information service (D-FIS) application entitled "Special air-report service". The details of this data link application are specified in ICAO Document 9694.

1.3 Special air-reports by voice communications

When voice communications are used, the elements contained in special air reports shall be:

…

Note 1.— Air-reports are considered routine by default. The message type designator for special air-reports is specified in the MOS-ATS, Appendix 1.

…

4. SPECIFIC PROVISIONS RELATED TO REPORTING WIND SHEAR AND VOLCANIC ASH

…

4.2 Post-flight reporting of volcanic activity

Note.— The detailed instructions for recording and reporting volcanic activity observations are given in the MOS-ATS, Appendix 1.

…

APPENDIX 3.5. TECHNICAL SPECIFICATIONS RELATED TO FORECASTS

(See CAR-ANS 3.6.)

1. CRITERIA RELATED TO TAF

1.1 TAF format

…

1.1.2 TAF shall be disseminated in IWXXM GML form in addition to the dissemination of the TAF in accordance with 1.1.1.

Note 1.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO-No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the implementation of IWXXM is provided in Manual on the ICAO Meteorological Information Exchange Model (IWXXM) (ICAO Document 10003).

…

1.2 Inclusion of meteorological elements in TAF

Note.— Guidance on operationally desirable accuracy of forecasts is given in MOS-MET, Attachment B.

…

4.4 Exchange of area forecasts for low-level flights

Area forecasts for low-level flights prepared in support of the issuance of AIRMET information shall be exchanged between aerodrome meteorological offices and/or meteorological watch offices responsible for the issuance of flight documentation for low-level flights in the flight information regions concerned.

Table A3.5-1. Template for TAF

…

Note 2.— The explanations for the abbreviations can be found in the Procedures for Air Navigation Services — ICAO Abbreviations and Codes *(PANS-ABC, ICAO Document 8400).*

…

APPENDIX 3.6. TECHNICAL SPECIFICATIONS RELATED TO SIGMET AND AIRMET INFORMATION, AERODROME WARNINGS AND WIND SHEAR WARNINGS AND ALERTS

(See CAR-ANS 3.7.)

1. SPECIFICATIONS RELATED TO SIGMET INFORMATION

1.1 Format of SIGMET messages

…

1.1.6 SIGMET information shall be disseminated in IWXXM GML form in addition to the dissemination of SIGMET information in accordance with 1.1.1.

Note 1.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO-No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the implementation of IWXXM is provided in the Manual on the ICAO Meteorological Information Exchange Model (IWXXM) (ICAO Document 10003).

…

2. SPECIFICATIONS RELATED TO AIRMET INFORMATION

2.1 Format of AIRMET messages

…

2.1.6 AIRMET information shall be disseminated in IWXXM GML form in addition to the dissemination of AIRMET information in accordance with 2.1.1.

Note 1.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO-No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the implementation of IWXXM is provided in the Manual on the ICAO Meteorological information Exchange Model (IWXXM) (ICAO Document 10003).

…

Table A3.6-2. Template for aerodrome warnings

…

Note 2.— The explanations for the abbreviations can be found in the Procedures for Air Navigation Services — ICAO Abbreviations and Codes *(PANS-ABC, ICAO Document 8400).*

…

Table A3.6-3. Template for wind shear warnings

…

Note 2.— The explanations for the abbreviations can be found in the Procedures for Air Navigation Services — ICAO Abbreviations and Codes *(PANS-ABC, ICAO Document 8400).*

…

APPENDIX 3.8. TECHNICAL SPECIFICATIONS RELATED TO SERVICE FOR OPERATORS AND FLIGHT CREW MEMBERS

(See CAR-ANS 3.9.)

…

2. SPECIFICATIONS RELATED TO INFORMATION FOR PRE-FLIGHT PLANNING AND IN-FLIGHT RE-PLANNING

…

2.2 Format of information on significant weather

…

2.2.2 As of 4 November 2021, in addition to 2.2.1, information on significant weather supplied by WAFCs for pre-flight planning and in-flight replanning shall be in IWXXM GML form.

Note 1.— The technical specifications for IWXXM are contained in the Manual on Codes *(WMO-No. 306), Volume I.3, Part D —* Representation Derived from Data Models. *Guidance on the implementation of IWXXM is provided in the Manual on the ICAO Meteorological Information Exchange Model (IWXXM) (ICAO Document 10003).*

…

4. SPECIFICATIONS RELATED TO FLIGHT DOCUMENTATION

4.1 Presentation of information

…

4.1.2 The flight documentation related to concatenated route-specific upper wind and upper-air temperature forecasts shall be provided when agreed between the meteorological authority of the Philippines and operator concerned.

Note.-Guidance on the design, formulation and use of concatenated charts is given in the manual of Aeronautical Meteorological Practice (ICAO Document 8896).

…

5. SPECIFICATIONS RELATED TO AUTOMATED PRE-FLIGHT INFORMATION SYSTEMS FOR BRIEFING, CONSULTATION, FLIGHT PLANNING AND FLIGHT DOCUMENTATION

…

5.2 Detailed specifications of the systems

Automated pre-flight information systems for the supply of meteorological information for self-briefing, pre-flight planning and flight documentation shall:

…

d) provide for rapid response to a user request for information.

Note.— ICAO abbreviations and codes and location indicators are given respectively in the Procedures for Air Navigation Services — ICAO Abbreviations and Codes *(PANS-ABC, ICAO Document 8400) and* Location Indicators *(ICAO Document 7910). Aeronautical meteorological code data-type designators are given in the WMO Publication No. 386,* Manual on the Global Telecommunication System.

…

6. SPECIFICATIONS RELATED TO INFORMATION FOR AIRCRAFT IN FLIGHT

…

6.2 Information for in-flight planning by the operator

Meteorological information for planning by the operator for aircraft in flight shall be supplied during the period of the flight and shall normally consist of any or all of the following:

…

Note.— Guidance on the display of graphical information in the cockpit is provided in the Manual of Aeronautical Meteorological Practice *(ICAO Document 8896).*

…

APPENDIX 3.10. TECHNICAL SPECIFICATIONS RELATED TO REQUIREMENTS FOR AND USE OF COMMUNICATIONS

(See CAR-ANS 3.11.)

1. SPECIFIC REQUIREMENTS FOR COMMUNICATIONS

…

2. USE OF AERONAUTICAL FIXED SERVICE COMMUNICATIONS AND THE PUBLIC INTERNET

2.1 Meteorological bulletins in alphanumeric format

2.1.3 Heading of bulletins Meteorological bulletins containing operational meteorological information to be transmitted via the aeronautical fixed service or the public Internet shall contain a heading consisting of:

…

Note 1.— Detailed specifications on format and contents of the heading are given in WMO Publication No. 386, Manual on the Global Telecommunication System, *Volume I and are reproduced in the* Manual of Aeronautical Meteorological Practice *(ICAO Document 8896).*

Note 2.— ICAO location indicators are listed in Location Indicators *(ICAO Document 7910).*

…

3. USE OF AERONAUTICAL MOBILE SERVICE COMMUNICATIONS

3.1 Content and format of meteorological messages

...

3.1.2 The content and format of air-reports transmitted by aircraft shall be consistent with the provisions of 3.5 of this CAR-ANS and the MOS-ATS, Appendix 1.

...

5.3 Format of information to be included in VOLMET broadcasts

...

5.3.2 VOLMET broadcasts shall use standard radiotelephony phraseologies.

Note.— Guidance on the standard radiotelephony phraseologies to be used in VOLMET broadcasts is given in the Manual on Coordination between Air Traffic Services, Aeronautical Information Services and Aeronautical Meteorological Services *(* ICAO Document *9377), Appendix 1.*

...

xxx

-END-

i. ***Separability Clause.*** - If, for any reason, any provision of this Memorandum Circular is declared invalid or unconstitutional, the other part or parts thereof which are not affected thereby shall continue to be in full force and effect.

ii. ***Repealing Clause.*** - All orders, rules, regulations and issuances, or parts thereof which are inconsistent with this Memorandum Circular are hereby repealed, superseded or modified accordingly.

iii. ***Determination of changes.*** – To highlight the amendments and/or revisions in the Memorandum Circular, the deleted text shall be shown with strikethrough and the new inserted text shall be highlighted with grey shading, as illustrated below:

1. Text deleted: ~~Text to be deleted is shown with a line through it.~~
2. New text inserted: New text is highlighted with grey shading.
3. New text replacing existing text: ~~Text to be deleted is shown with a line through it~~ followed by the replacement text which is highlighted with grey shading.

iv. ***Effectivity Clause.*** - This Memorandum Circular shall take effect fifteen (15) days after publication in a requisite single newspaper of general circulation or the Official Gazette and a copy filed with the U.P. Law Center - Office of the National Administrative Register. The amendment shall be incorporated to Philippine CAR-ANS in the next regular Amendment Cycle.

So Ordered. Signed this 18 day of DEC 2023, at the Civil Aviation Authority of the Philippines, MIA Road, Pasay City, Metro Manila, 1301.

CAPTAIN MANUEL ANTONIO L. TAMAYO
Director General